

GLOSSARY

Section I - ACRONYMS AND ABBREVIATIONS

aa	air assault	COSCOM	corps support command
abn	airborne	CP	command post
ACR	armored cavalry regiment	CS	combat support
ADC	area damage control	CSG	combat service group
ADC-S	assistant division commander for support	CSS	combat service support
ADE	assistant division engineer	CTA	common table of allowance
AFFS	Army Field Feeding System	DA	Department of the Army
agcy	agency	DCSLOG	Deputy Chief of Staff for Logistics
ALOC	air lines of communication	DCSOPS	Deputy Chief of Staff for Operations and Plans
ammo	ammunition	det	detachment
AO	area of operations	DISCOM	division support command
AOR	areas of responsibility	distr	distribution
		div	division
APU	auxiliary power unit	DMMC	division materiel management center
AR	Army regulation	DOS	days of supply
ARC	accounting requirements code	DS	direct support
ASG	area support group	DSA	division support area
ATCSS	Army Tactical Command and Control System	DZ	drop zone
		EAC	echelons above corps
ATP	Army Training Program	env	environment
attn	attention	EPW	enemy prisoner of war
BCOC	Base Cluster Operations Center	evac	evacuation
BDOS	Base Defense Operations Center	FAST	Freight Automated System for Traffic Management
bde	brigade	FAWPSS	Forward Area Water Point Supply System
bk	book	fld	field
br	branch	FM	field manual
BSA	brigade support area	FSB	fire support base OR forward support battalion/brigade?
bn	battalion	G3	Assistant Chief of Staff, G3 (Operations and Plans)
CA	commercial activities	G4	Asst Chief of Staff, Logistics
CEB	clothing, exchange and bath center	G5	Assistant Chief of Staff, G5 (Civil Affairs)
cen	center		
CEOI	Communications Electronics Operation Instructions	gpd	gallons per day
CFFS	Combat Field Feeding System	gph	gallons per hour
cfs	cubit feet per second	gpm	gallons per minute
cgo	cargo	GPW	Geneva Convention Relative to the Treatment of Prisoners of War
cl	class	GRREG	graves registration
CMMC	Corps Materiel Management Center	GS	general support
co	company	hdlg	handling
coll	collection		
comd	command		
COMM	communications		
con	control		

HET	heavy-equipment transporter	NATO	North Atlantic Treaty Organization
HHd	headquarters and headquarters detachment	NBC	nuclear, biological, and chemical
HMMWV	High Mobility Multi-purpose Wheeled Vehicle	NIGA	neutron induced gamma activity
HN	host nation	NTU	nephelometric turbidity units
HNS	host nation support	OCI-	hypochlorite ion
HOCI	hypochlorous acid	ofc	office
HQ	headquarters	OIC	officer in charge
hvy	heavy	op	operations
ident	identification	OP	observation post
IPB	intelligence preparation of the battlefield	OPCON	operational control
JTU	Jackson turbidity units	OPROJ	Operational Project
KIA	killed in action	PCHT	packaging, crating, handling, and transportation
LAPE	Low Altitude Parachute Extraction	pCi	Picocuri
LIB	Light Infantry Battalion	pci/l	Picocuri per liter
LIC	low intensity conflict	petrl	petroleum
LID	Light Infantry Division	pH	potential Hydrogen
LO	Liaison Officer	plt	platoon
LOC	lines of communication	POL	petroleum, oils and lubricants
log	logistics	POW	prisoner of war
LOGPAC	logistics packaging	ppm	parts per million
LOGCAP	logistical civil augmentation program	prop	property
LOTS	Logistics Over the Shore Operations	purif	purification
LP	listening post	PVNTMED	preventive medicine
lt	light	PWRMS	pre-positioned war reserve materiel stocks
LZ	landing zone	PWS/DS	potable water storage and distribution systems
maint	maintenance	QM	quartermaster
mat	materiel	QSTAG	quadripartite standardization agreement
MBA	main battle area	RAOC	rear area operations center
MCC	movement control center	RAP	rear area protection
mdm	medium	rec	record
METT-T	mission, enemy, terrain, troops, time	ROWPU	reverse osmosis water purification unit
mgd	million gallons per day	RTOC	rear tactical operations center
mg/l	milligrams per liter	S1	Adjutant (US Army)
mgt	management	S2	Intelligence Officer (US Army)
MKT	mobile kitchen trailer	S3	Operations and Training Officer (US Army)
ml	milliliter	S4	Supply Officer (US Army)
MMC	Materiel Management Center	S&S	supply and service
MOPP	mission-oriented protection posture	S&T	supply and transport
MOS	military occupational specialty	SIDPERS	Standard Installation/Division Personnel System
MOV	military owned vehicle	SMFT	semi-trailer mounted fabric tank
MP	military police	SOD	special operations detachment
MPN	Most Probable Number	SOI	signal operation instructions
MRE	meal, ready-to-eat	SOP	standing operating procedure
MRO	materiel release order	spt	support
MSB	main supply battalion	SPO	security, plans, and operations
MSR	main supply route		
MTOE	modification table of organization and equipment		

sqd	squad	TMT	transportation motor transport
sqdn	squadron	TO	theater of operations
SSI	silica silt index	TOE	table of organization and equipment
STANAG	NATO Military Standardization Agreement	TPFDL	Timed-Phased Forced Deployment Lists
stor	storage	trans	transportation
sup	supply	TRANSCOM	transportation command
svc	service	trf	transfer
TA	theater Army	trk	truck
TAACOM	Theater Army Area Command	trp	troop
TAC	Tactical Air Command	TU	turbidity units
TAMMC	theater army materiel management center	TWDS	tactical water distribution systems
TCF	tactical combat force	UIC	unit identification code
TDA	table of distribution and allowances	US	United States
TDS	total dissolved solids	USA	United States Army
tk	truck	USAF	United States Air Force
TM	technical manual	VA	Virginia

Section II - DEFINITIONS

Absorption - The process of taking in or soaking up liquids (not to be confused with adsorption).

Acid - A compound, usually having a sour taste, which is able to neutralize an alkali or base. A substance that dissolves in water with a formation of hydrogen ions.

Acidity - A quantitative measurement of the total acid constituents of a water, both in the ionized and unionized states expressed as pH.

Aerobic - Requiring the presence of free oxygen.

Algae - (1) Tiny plant life, usually microscopic, existing in water. They are mostly green, blue-green, or yellow-green, and are the cause of most tastes and odors in water. (2) Microscopic plants which contain chlorophyll and live floating or suspended in water. They also may be attached to structures, rocks, or other submerged surfaces. Excess algae growths can impart tastes and odors to potable water. Algae produce oxygen during sunlight hours and use oxygen during the night hours. Their biological activities appreciably affect the pH and dissolved oxygen of the water.

Alkali - Various soluble salts, principally of sodium, potassium, magnesium, and calcium, that have the property of combining with acids to form neutral salts and may be used in chemical water treatment processes.

Alkaline - The condition of water or soil which contains a sufficient amount of alkali substances to raise the pH above 7.0.

Alkalinity - A term used to represent the content of carbonates, bicarbonates, hydroxides, and occasionally borates, silicates, and phosphates in water.

Anaerobic - Requiring the absence of free oxygen.

Aquifer - A water-bearing formation or stratum beneath the earth's surface which transmits water from one point to another.

Backwash - The reversal of flow through a filter to wash clogging material out of the filtering medium and reduce conditions causing loss of head. Also called filter wash.

Bacteria - Primitive microscopic plants, generally free of pigment, which reproduce by dividing. They do not require light for their life processes.

Bacteria Count - An estimate of the total number of bacteria of all kinds in 1 milli-liter sample which will grow at the stated temperature, usually 37C. Also known as standard plate count.

Base - An alkali or hydroxide of the alkali metals, and of ammonia, which neutralized acids to form salts and water. Ionizes to form (OH⁻)ions. A hydroxide. An Alkali.

Brackish Water - Water rendered unfit for drinking because of salty or unpleasant tastes caused by the presence of excessive amounts of dissolved chemicals, chlorides, sulfates, and alkalis.

Chloramines - Compounds of organic amines or ammonia with chlorine.

Chlorination - Treatment of water by the addition of chlorine either as a gas or liquid, or in the form of hypochlorite, usually for the purpose of disinfection and oxidation.

Chlorinator - A device to apply chlorine to water at a known, controlled rate.

Chlorine - A powerful disinfectant used extensively in water treatment. As a gas, its color is greenish yellow and it is about 2 1/2 times heavier than air. As a liquid it is amber colored and about 1 1/2 times heavier than water. It is toxic to all organisms and corrosive to most metals.

Chlorine Demand - The difference between the amount of chlorine added to water and the amount of residual chlorine remaining at the end of a specified contact period. Chlorine demand may change with dosage, time, temperature, pH, nature, and amount of the impurities in the water.

Chlorine Dose - The amount of chlorine applied to a given amount of water. Usually measured in mg/l or ppm. The chlorine dose is equal to the chlorine demand plus the chlorine residual, when breakpoint chlorination is being used.

Chlorine Requirement - The amount of chlorine which must be added to produce the desired result under stated conditions. The result (the purpose of chlorination) may be based on any number of criteria, such as a stipulated coliform density, a specified residual chlorine concentration, the destruction of a chemical constituent, or others. In each case a definite chlorine dosage will be necessary. This dosage is the chlorine requirement.

Chlorine Residual - The total amount of chlorine (combined and free available chlorine) remaining in water at the end of a specified contact period following chlorination.

Coliform Organisms - A group of bacteria, predominantly inhabitants of the intestine of humans, but also found on vegetation, including all

aerobic and facultative anaerobic bacilli, that ferment lactose to produce a gas as one of the byproducts.

Color, Apparent - Pigmentation due to the presence of suspended solids in a water supply.

Color, True - Pigmentation due to the presence of finely divided particles or droplets either dispersed, or in solution, in a water supply.

Command Surgeon - The brigade surgeon, division surgeon, or corps surgeon responsible for provision of medical support at the brigade, division, or corps concerned.

Compound - A substance containing molecules or two or more different elements which have entered into chemical combination with each other to form another substance unlike any of the constituent elements.

Concentration - A measure of the amount of dissolved substances contained per unit volume of solution. May be expressed as grains per gallon, pounds per million gallons, milligrams per liter.

Contaminant - As referred to in QSTAG and STANAG, any physical chemical, biological, or radiological substance or matter in water.

Contamination - A general term signifying the introduction into water of micro-organisms, chemicals, wastes, or sewage, which renders the water unfit for its intended use. Usually considered to imply the presence, or possible presence, of disease-producing bacteria. A specific type of pollution.

Corrosion - (1) The destruction of a substance; usually a metal, or its properties because of a reaction with its (environment) surroundings. (2) A complex chemical or electro-chemical action in which metals are converted into metallic ions and are carried into solution resulting in damage to pipes, fittings, and other metal components.

Dehydrate - To lose water from body tissues.

Discharge - (1) As applied to a stream, the rate of flow or volume of water flowing at a given place within a period of time. (2) The process of water or other liquid passing through an opening or along a conduit or channel. (3) The water or other liquid which emerges from an opening or passes along a conduit or channel.

Disinfectant - Any oxidant, including but not limited to chlorine, chlorine dioxide, chloramines, and ozone added to water in any part of the treatment or distribution process, that is intended to kill or inactivate pathogenic micro-organisms.

Disinfection - The process of killing most (but not necessarily all) of the harmful and objectionable micro-organisms in a fluid by various agents such as chemicals, heat, ultraviolet light, ultrasonic waves, and radiation.

Dissolved Solids - Solids that are present in solution.

Dose Equivalent - The product of the absorbed dose from ionizing radiation and such factors as account for differences in biological effectiveness due to the type of radiation and its distribution in the body as specified by the International Commission on Radiological Units and Measurements.

Escherichia Coli (E. Coli) - One of the species of bacteria in the coliform group. Its presence is considered indicative of fresh fecal contamination.

Evaporation - (1) The process by which water passes from a liquid state, at temperatures below the boiling point, to vapor. It is the principal process by which surface or subsurface water is converted to atmospheric vapor. (2) The quantity of water, measured as liquid water, removed from a specified surface per unit of time - generally in inches or centimeters per day, month, or year.

Field Water Supply System - That assemblage of collection, purification, storage, transportation, and distribution equipment and personnel to provide potable water to field units in both training and actual employment environments.

Filter - A device or structure for removing solid or colloidal matter (which usually cannot be removed by sedimentation) from water, or other liquids or semi-liquids, by a straining process whereby the solids are held on a medium of some kind (granular, diatomaceous earth, woven, and porous) while the liquid passes through.

Fixed Installation - An installation that, through extended use, has gained those structures and facilities not initially found or intended for use at a "temporary" standard facility (paved roads, fixed

electrical distribution systems, fixed water treatment facilities, and underground distribution lines).

Fresh Water - Fresh water has a TDS concentration of less than 1,500 ppm. Brackish waters are highly mineralized and have a TDS concentration between 1,500 ppm and 15,000 ppm. Saltwaters have a TDS concentration greater than 15,000 ppm.

Ground Water - Water occurring in a stratum (aquifer) below the surface of the ground. The term is not applied to water which is percolating or held in the top layers of the soil, but to that below the water table.

Hardness - A characteristic of water, chiefly due to the existence therein of the carbonates and sulfates (and occasionally the nitrates and chlorides) of calcium, iron, and magnesium; causes "curdling" of water when soap is used, increased consumption of soap, deposition of scale in boilers, injurious effects in some industrial processes and sometimes objectionable taste in the water. Commonly computed from the amounts of calcium and magnesium in the water and expressed as equivalent calcium carbonate.

Head - The height of the free surface of a fluid above a specified point in a hydraulic system. Head is expressed in linear units (or fractions thereof) such as feet or meters. Head is usually identified as static, dynamic, friction, velocity, and total.

Health Hazards - Any condition, including any device or water treatment practice, that may create an adverse effect on a person's well-being.

Host - A living animal or plant in which a pathogenic organism grows.

Hydrogen-ion Concentration (pH) - A measure of the acidity or alkalinity of a solution. A value of seven is neutral; low numbers are acid, large numbers are alkaline. Strictly speaking, pH is the negative logarithm of the hydrogen-ion concentration.

Hydrologic Cycle - The complete cycle of phenomena through which water passes, beginning as atmospheric water vapor, passing into liquid or solid form as precipitation, thence along or into the ground surface, and finally again returning to the form of atmospheric water vapor.

Hypochlorinators - Hypochlorinators are devices that are used to feed calcium or sodium hypochlorite as the disinfecting agent.

Incubation Period - The time required between infection by a pathogenic organism and the appearance of the signs of a disease.

Infiltration - (1) The flow or movement of water through the pores of a soil or other porous medium. (2) The absorption of liquid water by the soil, either as it falls as precipitation, or from a stream flowing over the surface. Also called seepage.

Inorganic Matter - Chemical substances of mineral origin; not of basically carbon structure.

Installation Medical Authority - Installation medical authority refers to the unit surgeon, command chief surgeon, US Army Medical Department Activity/US Army Medical Center commanders, and the Director of the Health Services or his representative responsible for provision of medical support at the unit, command or installation concerned in consultation with sanitary engineers and environmental science officers when appropriate.

Ion - An atom or molecule that has gained or lost one or more electrons.

Ionization - The process of the formation of ions by the splitting of molecules of electrolytes in solution.

Maximum Permissible Concentration - The maximum permissible level of a contaminant in water which is delivered to a free flowing outlet of the ultimate user of a military water system, except in the case of turbidity where the maximum permissible level is measured at the point of entry to the distribution system. Contaminants added to the water under circumstances controlled by the user, except those resulting from corrosion of piping and plumbing caused by water quality, are excluded from this definition.

Membrane Filtration - A method of quantitative or qualitative analysis of bacterial or particulate matter in a water sample by filtration through membrane capable of retaining bacteria.

Micro-Organism - A minute plant or animal in water or earth that is visible only through a microscope.

Milligrams Per Liter - A unit of the concentration of water or wastewater constituent. It has replaced the parts per million unit, to which it is approximately equivalent, in reporting the results of water analyses.

Mineral - (1) Any of a class of substances occurring in nature, usually comprising inorganic substances (such as quartz and feldspar) of definite chemical composition and usually of definite crystal structure, but sometimes also including rocks formed by these substances as well as certain natural products of organic origin, such as asphalt and coal. (2) Any substance that is neither animal or vegetable.

Molecule - The smallest portion of an element or compound retaining or exhibiting all the properties of the substance.

Most Probable Number (MPN) - (1) The best estimate, according to statistical theory, of the number of coliform (intestinal) organisms present in 100 ml of a water sample. (2) In the testing of bacterial density by the dilution method, that number of organisms per unit volume which, in accordance with statistical theory, would be more likely than any other possible number to yield the observed test result or which would yield the observed test result with the greatest frequency. Expressed as density of organisms per 100 ml.

Nonpotable Water - Water that has not been examined, properly treated, and approved by appropriate authorities as being safe for soldiers consumption. All water is considered nonpotable until declared potable.

Organic - (1) Characteristic of, pertaining to, or derived from living organisms. (2) Pertaining to a class of chemical compounds containing carbon.

Osmosis - The passage of a liquid from a weak solution to a more concentrated solution across a semipermeable membrane. The membrane allows the passage of the water (solvent) but not the dissolved solids (solutes). This process tends to equalize the conditions of either side of the membrane.

Palatable Water - Water that is pleasing to the taste; significantly free from color, turbidity, taste, and odor. Does not imply potability.

Peak Demand - The maximum load placed on a water system. This is usually the maximum average load over a period of time such as peak hourly demand, peak daily demand, or instantaneous peak demand.

pH - A measure of the acidity or alkalinity of a solution. A value of seven is neutral; low numbers are acid, large numbers are alkaline. Strictly speaking, pH is the negative logarithm of the hydrogen-ion concentration.

Picocuri (pCi) - That quantity of radioactive material producing 2.22 nuclear transformations per minute.

Pollution - The addition of sewage, industrial wastes, or other harmful or objectionable material to water. A general term that does not necessarily signify the presence of disease-producing bacteria.

Potable - (1) Water which does not contain any objectionable substances or pollution, and is satisfactory for human consumption. (2) Water that is free from disease-producing organisms, poisonous substances, and chemical or biological agents and radioactive contaminants which make it unfit for human consumption and many other uses. Potable water may or may not be palatable.

Precipitation - (1) The total measurable supply of water received directly from clouds, as rain, snow, hail, and sleet, usually expressed as depth in a day, month, or year, and designated as daily, monthly, or annual precipitation. (2) The process by which atmospheric moisture is discharged onto a land or water surface. (3) The phenomenon which occurs when a substance held in solution in a liquid passes out of solution into solid form.

Pressure - (1) The total load or force acting upon a surface. (2) In hydraulics the term when used without qualifications usually means pressure per unit area (pounds per square inch, or kilograms per square centimeter) above local atmospheric pressure.

Product Water - This water is the product from the water treatment process and is ready to be consumed (also called FINISHED WATER).

Rate of Flow - The volume of water per unit of time which is passing a certain observation point at a particular instant. Common expressions are cubic

feet per second (cfs), gallons per minute (gpm), gallons per day (gpd), million gallons per day (mgd).

Raw Water - Untreated water; usually the water entering the first treatment unit of a water purification unit. Water used as a source of water supply taken from a natural or impounded body of water, such as a stream, lake, pond, or ground water aquifer.

Reverse Osmosis - The application of pressure to a concentrated solution which causes the passage of a liquid from the concentrated solution to a weaker solution across a semipermeable membrane. The membrane allows the passage of the solvent (water) but not the dissolved solids (solutes). The liquid produced is a demineralized water.

Runoff - (1) In the general sense, that portion of the precipitation which is not absorbed by the deep strata, but finds its way into the streams after meeting the persistent demands of evapotranspiration. (2) That part of the precipitation which runs off the surface of a drainage area and reaches a stream or other body of water or a drain or sewer.

Sanitary Defects - Conditions that may permit the contamination of a water supply during or after treatment. These include connections to unsafe water supplies, raw water bypasses in treatment plants, plumbing fixtures improperly designed and installed, and leaking water and sewer pipes in the same trench.

Sanitary Survey - An inspection conducted in order to evaluate site specific geographic and environmental conditions in a watershed for the purpose of rendering a recommendation concerning use of the watershed for a particular purpose.

Sedimentation - Process of subsidence and deposition by gravity of suspended matter carried by water or other liquids. Also called settling, it is usually accomplished by reducing the velocity of flow of the liquid below the point where it can transport the suspended material.

Solution - A gas, liquid, or solid dispersed homogeneously in a gas, liquid, or solid.

Solution Feeder - A feeder for dispensing a chemical or other material in the liquid or dissolved state to water at a rate controlled manually

or automatically by the quantity of flow. The constant rate is usually volumetric.

Spring - A surface feature where water issues from a rock or soil onto the land or into a body of water, the place of issuance being relatively restricted in size. Springs are classified in accordance with many criteria, including character of water, geologic formation, and geographical location.

Stratum - A geological term used to designate a single bed or layer of rock which is more or less homogeneous in character.

Suspended Solids - All visible material in water which at the time of sampling is not dissolved, and which can be removed by filtration.

Suspension - A system consisting of small particles kept dispersed by agitation or by molecular motion in the surrounding water. The permanence of suspension is dependent on the degree of agitation and the size of particles. A colloid is a special kind of suspension.

Temperature - (1) The thermal state of a substance with respect to its ability to communicate heat to its environment. (2) The measure of the thermal state on the arbitrarily chosen numerical scale, usually Centigrade or Fahrenheit.

Total Dissolved Solids - All of the dissolved solids in a water. TDS is measured on a sample of water that has passed through a very fine mesh filter to remove suspended solids. The water passing through the filter is evaporated and the residue represents the dissolved solids.

Transpiration - The process by which plants dissipate water into the atmosphere through their leaves and other surfaces.

Treated Water - Water that has undergone processing such as sedimentation, filtration, softening, disinfection, and is ready for consumption. Included is purchased potable water which is retreated (chlorinated and fluoridated). Does not imply potability until inspected by PVNTMED personnel and approved by the command surgeon.

Turbidity - (1) A condition in water caused by the presence of suspended matter, resulting in the scattering and absorption of light rays. (2) A measure of fine suspended matter in liquids. (3) An analytical

quantity usually reported in arbitrary turbidity units determined by measurements of light diffraction.

Turbidity Units (TU) - Turbidity units are a measure of the cloudiness of water. If measured by a nephelometric (deflected light) instrumental procedure, turbidity units are expressed in nephelometric turbidity units (NTU) or simply TU. Those turbidity units obtained by visual methods are expressed in Jackson turbidity units (JTU) which are a measure of the cloudiness of water, they are used to indicate the clarity of water. There is no real connection between NTUs and JTUs. The Jackson Turbidimeter is a visual method and the nephelometer is an instrumental method based on deflected light.

Vector - An insect or other organism that carries and transmits a pathogenic amoeba, bacterium, fungus, virus, or worm.

Virus - The smallest (10 to 300 millimicrons in diameter) form capable of producing infection and diseases in humans or other large species. The true viruses are insensitive to antibiotics. They multiply only in living cells where they are assembled as complex macromolecules utilizing the cells' biochemical systems. They do not multiply by division as do intracellular bacteria.

Water - A chemical compound consisting of two parts of hydrogen and one part of oxygen and usually having other solid, gaseous, or liquid materials in solution or suspension.

Water-Bearing Formation - A term, more or less relative, used to designate a geological formation that contains considerable ground water. It is usually applied to formations from which the ground water may be extracted by pumping.

Water Quality - The chemical, physical, and biological characteristics of water with respect to its suitability for a particular purpose. The same water may be of good quality for one purpose or use, and bad for another, depending on its characteristics and the requirements for the particular use.

Water Rights - The rights, acquired under the law, to use the water occurring in surface or ground waters, for a specified purpose and in a given manner

and usually within the limits of a given period. While such rights may include the use of a body of water for navigation, fishing, and hunting, other recreational purposes, the term is usually applied to the right to divert or store water for some beneficial purpose or use, such as irrigation, generation of hydroelectric power, and water supply for human consumption.

Water Table - The upper surface of a zone of saturation (in ground water) where the aquifer is not confined by an overlying impermeable formation.

Well - An artificial excavation that derives water from the interstices of the rocks or soil which it penetrates.

Well, Artesian - A well tapping a confined or artesian aquifer in which the static water level stands above the bottom of the confining bed and the top of the aquifer. The term is used to include all wells tapping such basins or aquifers. Those in which the head is insufficient to raise the water to or above the land surface are called sub-artesian wells.